CLIMATE RESILIENCE IN NATURE-SMART LIBRARIES

Photo credit: Austin Public Library. Austin Public Library has gardens and natural vegetation which they use to support children's programming around nature and space for nature exploration and connections.

WHAT IS A NATURE-SMART LIBRARY? *Nature-smart libraries integrate nature into services, programs and physical environments to promote equitable access to the outdoors. They also help to accomplish local goals (i.e., early childhood literacy); provide children and caretakers access to safe, quality nature experiences; create and sustain nature connections; and foster partnerships across city departments and local organizations.*

INTRODUCTION

Nature-smart libraries are uniquely positioned to act as a hub for local climate resilience efforts. With most people living within two miles from a local library, libraries are community hubs that can foster nature connections through interactive outdoor spaces, lending programs, curated collections and more. Communities across the U.S. are looking to nature-smart libraries as ideal partners to not only expand nature spaces and programs where children live, learn and play, but also strengthen climate resilience efforts.

Strengthening sites that children frequent, such as nature-smart libraries, can provide a barrier against climate events. Focusing on the needs of children is especially important as they are considered a high-risk population when exposed to climate events such as extreme heat, air pollution and flooding. Besides the health impacts they cause, climate-related disasters also have the ability to disrupt early childhood education programs, impacting children's overall development and well-being. Improving access and quality of nature can also help to combat climate change impacts. The following recommendations are for communities new to such initiatives, and are not comprehensive

to the entire breadth of work being accomplished throughout the country. Additionally, it will highlight the numerous co-benefits that investing in climate resilience and green infrastructure offers to improve children's access to nature and strengthen overall community resilience.

NATURE-SMART LIBRARY POLICIES & PLANS THAT ALIGN WITH CLIMATE GOALS

Creating and aligning nature-smart libraries with community-wide climate action initiatives, especially those focusing on children and nature, can help promote system-wide approaches to improving climate resilience. They can also help align site-specific green infrastructure strategies and practices with broader community initiatives, strengthening the drive for community-wide change. The City of Austin Public Library, for example, operates under the Austin Climate Equity Plan, centering libraries to lead by example through sustainable design and construction standards. Nature-smart libraries can also become standardized across city and county library networks. The King County Climate Action Plan provides short- and long-term goals for the entire county library system to improve sustainable building design, water, energy, community resilience and more.

Nature-smart libraries also serve as essential infrastructure during extreme weather events, all of which are exacerbated by climate change, such as extreme heat, power outages, wildfires, and snow and ice storms. This creates an opportunity to have nature-smart libraries serve as resilience hubs during emergency weather events and align with emergency preparedness plans. In Grand County Utah, libraries are not only used in the Emergency Operations Plan as long term shelters (while providing activities for children sheltering), but also as sites to disseminate family-friendly information about Be Ready Utah, the State's emergency and disaster program. Chicago blends both disaster response and green infrastructure across their library system, too. During heat emergency events, a notification system helps residents identify public spaces, such as libraries, to seek cool shelter. Their Chicago Climate Action Plan also requires all new City buildings to be designed and constructed to LEED Silver Standard, resulting in seven public libraries reaching this status.

GREEN INFRASTRUCTURE & NATURE-BASED UPGRADES ON LIBRARY SITES

Transforming green space around your local library offers several opportunities to both strengthen children and nature goals, as well as climate resilience efforts. Pollinator gardens offer opportunities for educational nature learning while also helping to protect the local ecosystem and strengthen biodiversity. The Sun Ray Library in Saint Paul, MN installed a pollinator prairie garden and outdoor reading garden to help promote literacy and environmental education. Examples such as this, as well as outside story areas and mini-nature trails around the library, can help foster curiosity and a wider support of conservation and climate efforts, while also implementing nature-based solutions that help to combat urban heat islands and urban flooding.

Where natural shade is unavailable, libraries can install built shade structures (e.g., pergolas, pavilions, shade sails) to help children's, librarians', and caretakers' exposure to extreme heat. The central Austin Public Library branch, for example, utilizes a solar panel arbor to help shade a rooftop garden packed with indigenous plants to the area. Green infrastructure interventions also create an

opportunity for libraries to tackle stormwater runoff. Richmond, VA's Greening Richmond Public Libraries initiative has been collaborating with City and community partners since 2019 to reduce stormwater runoff through the implementation of green infrastructure and improve the health of the James River. Such strategies include bioretention basins on roofs and parking lots, planting of native trees and shrubs, establishing pollinator areas, installing permeable paver systems and more.

Libraries can also improve their building resilience to create safer, cost-efficient, and healthier spaces. Solar PV (photovoltaic) adds to a community's distributed energy load and energy resilience, while decreasing energy costs for the library. If solar PV is installed with "islanding" capabilities, the library can operate completely off the grid during disasters, increasing its usefulness as a disaster hub. Roofs can house not only solar PV, but can be transformed into green and cool roofs, helping to reduce urban heat islands and improve the buildings energy efficiency. Permeable and cool pavements around the facilities can help reduce heat as well as promote better stormwater management. The New Canaan Library incorporates all of these elements to create an all-electric, net-zero ready building. Solar PV and light-colored roofing helps to supply 45 percent of their electrical needs, while a shallow green roof of hardy sedum succulents helps with insulation, absorption of excess stormwater and reduction in urban heat.

CLIMATE RESILIENCE STRATEGIES & NATURE-SMART LIBRARY CURRICULUMS

Nature-smart libraries are essential for environmental education and stewardship. Climate resilience creates an opportunity to strengthen curriculum programs that improve literacy and education while instilling early appreciation for environmental stewardship. The American Library Association provides a comprehensive guide as to how libraries can respond to climate change through book club programs, community dialogues, mindfulness programming and more. It also uplifts the powerful role library workers have not only as environmental educations, but as individuals who can help unlock empowering practices that prioritize just energy transitions. The Brooklyn Public Library renovated its Greenpoint branch to serve as the Greenpoint Environmental Education Center. This public space not only utilizes green infrastructure to increase resilience, but acts as a method to engage with the community on environmental education programs. As children age within the library system, climate resilience programming has the ability to advance with them through green workforce development learning opportunities. The Boston Public Library, for example, provides accessible, public guides on green workforce development.

TOOLS & RESOURCES

- Nature Smart Libraries Toolkit, National League of Cities and Children & Nature Network
- How Your Local Library Can Help Expand Access to Nature, National League of Cities
- The National Climate Action Strategy for Libraries Implementation Guide, American Library Association and Sustainable Libraries Initiative
- Resource Page, Sustainable Libraries Initiative
- Resilient Communities Initiative, American Library Association